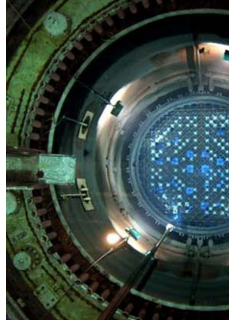


# Dresden Nuclear Power Station Units 2 and 3 Annual Assessment Meeting Open House May 19, 2015

2014 Reactor Oversight Process  
Nuclear Regulatory Commission – Region III

## Our Mission



To license and regulate the nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment.

## The NRC Regulates

- Nuclear reactors - commercial power reactors, research and test reactors, new reactor designs
- Nuclear materials - nuclear reactor fuel, radioactive materials for medical, industrial, and academic use
- Nuclear waste – transportation, storage and disposal of nuclear material and waste, decommissioning of nuclear facilities
- Nuclear security – physical security of nuclear facilities and materials from sabotage or attacks

## What We Don't Do

- Regulate nuclear weapons, military reactors, or space vehicle reactors
- Own or operate nuclear power plants
- Regulate some radioactive materials, such as X-rays and naturally occurring radon

## Some Nuclear Facts



- 99 nuclear power plants supply about 20 percent of the electricity in the U.S.



- Nuclear materials are used in medicine for diagnosis and cancer treatment.



- Nuclear materials are widely used in industry, such as in density gauges, flow measurement devices, radiography devices, and irradiators.

U.S. NRC  
United States Nuclear Regulatory Commission  
Protecting People and the Environment

## NRC Performance Goals

- Safety** – Ensure adequate protection of public health and safety and the environment
- Security** – Ensure adequate protection in the secure use and management of radioactive materials

6

U.S. NRC  
United States Nuclear Regulatory Commission  
Protecting People and the Environment

## How We Regulate

7

U.S. NRC  
United States Nuclear Regulatory Commission  
Protecting People and the Environment


## Regulatory Framework

8

U.S. NRC  
United States Nuclear Regulatory Commission  
Protecting People and the Environment

## Reactor Oversight Process

9



# Significance Threshold

## Performance Indicators

Green	White	Yellow	Red
-------	-------	--------	-----

Increasing Safety Significance

## Inspection Findings

Green	White	Yellow	Red
-------	-------	--------	-----

Increasing Safety Significance

10



# Significance Threshold


## Performance Indicators

- Green Baseline Inspection
- White Requires additional NRC oversight
- Yellow Requires more NRC oversight
- Red Requires most NRC oversight

## Inspection Findings

- Green Very low safety issue
- White Low to moderate safety issue
- Yellow Substantial safety issue
- Red High safety issue

11




# Action Matrix Columns

Licensee Response	Regulatory Response	Degraded	Multiple/Repetitive Degraded	Unacceptable Performance
-------------------	---------------------	----------	------------------------------	--------------------------

## Increasing

- Safety Significance
- Inspection
- Management Involvement
- Regulatory Action

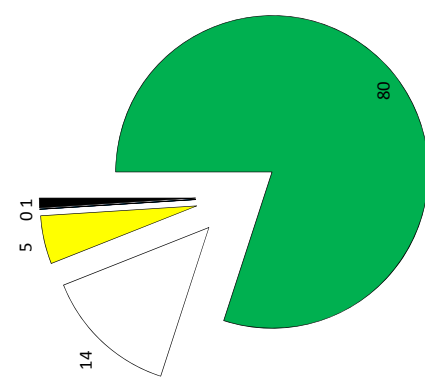
12



# Industry-Wide Performance

As of 12/31/2014

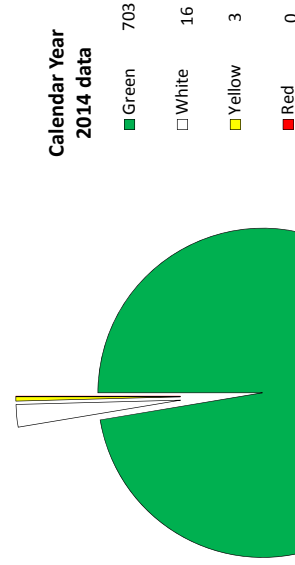
Licensee Response	Regulatory Response	Degraded Cornerstone	Multiple/Repetitive Degraded Cornerstone	Unacceptable	IMC 0350 Process
-------------------	---------------------	----------------------	--	--------------	------------------



13

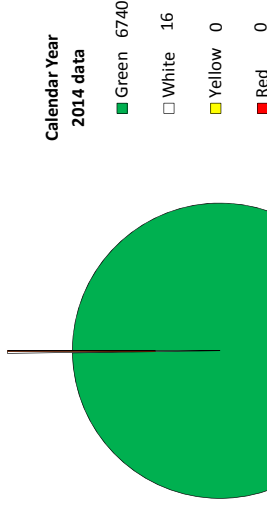
## Industry-Wide Inspection Findings

Finding data current as of 1/31/2015



14

## Industry-Wide Performance Indicators



15

## NRC Annual Assessment Summary

### Dresden Nuclear Power Station 2014



- Exelon operated the station safely and in a manner that preserved the public health and safety and protected the environment.
- Dresden Unit 2 was in the Licensee Response Column of the NRC's Action Matrix for the all four quarters of 2014
- Dresden Unit 2 transitioned to Regulatory Response Column in first quarter of 2015 due to a White performance indicator for greater than 3 scrams per 7000 operating hours
- Dresden Unit 3 was in the Licensee Response Column of the NRC's Action Matrix for the first three quarters of 2014.
- Dresden Unit 3 was in the Regulatory Response Column for the fourth quarter of 2014 due to a White finding associated with the inoperability of an Electromagnetic Relief Valve
- No Substantive Cross-Cutting Issues were identified

16

## NRC Inspection Activities

### Dresden Station 2014



- 5418 total hours expended by NRC on Reactor Oversight Process activities
- 2459 inspector hours of direct inspection activity
- 586 inspector hours reviewing and observing plant operating status
- 1723 inspector hours of preparation for and documentation of inspection activities
- 649 hours for other Reactor Oversight Process elements (e.g., assessments and communications)

17

## NRC Inspection Activities

### Dresden Nuclear Station

2014

- 2 resident inspectors on site – residents produced four quarterly inspection reports and performed daily plant walk-throughs
- 36 region based inspectors participated in various inspections
- 2 major team inspections – Triennial Fire Program and Biennial Problem Identification and Resolution

18

## Dresden Pls and Findings

January 1 through December 31, 2014

- All Green Performance Indicators
- 11 Green/Severity Level IV Inspection Findings
- 1 White Inspection Finding

19

## Safety Significant/White Findings

### Dresden Nuclear Unit 3

- NRC Identified one White finding in Fourth Quarter of 2014
- Involved one of four Electromagnetic Relief Valves on Main Steam Lines
- Valves are designed to rapidly reduce reactor vessel pressure if needed
- Licensee failed to ensure continued operability of valve with increased steam flows after implementing an approved power uprate
- Unit 3 transitioned to Regulatory Response Column of the Reactor Oversight Process effective for the Fourth Quarter of 2014

20

## NRC Inspection Findings

### Some Examples of 2014 Green Findings

#### Dresden Nuclear Power Station

- Deficiencies in evacuation time estimates
- Failure to correct unacceptable indications in mechanical supports for a safety-related heat exchanger
- Failure to take appropriate corrective action when a Maintenance Rule performance goal was not met
- Failure to adequately incorporate operating experience into site copy of a vendor manual used for equipment maintenance information

21



## NRC Inspection Plans for 2015 Dresden Nuclear Power Station

- NRC Plans Baseline Inspections and Supplemental Inspections for 2015. This includes the following major team and supplemental inspections
  - Review of corrective actions for White issue involving operability of Electromagnetic Relief Valve – after notification from licensee that they are ready for inspection
  - Review of corrective actions for White performance indicator – after notification from licensee that they are ready for the inspection
  - Triennial Modifications / 10CFR50.59 Changes Inspection – second quarter 2015
  - Initial Licensed Operator Examinations (completed first and second quarter)

22



## Actions in Response to the Japan Nuclear Accident

- Actions in response to Japan Nuclear Accident: <http://www.nrc.gov/japan/japan-info.html>
- Mailbox for comments on staff actions: [JLD\\_Public.Resource@nrc.gov](mailto:JLD_Public.Resource@nrc.gov)
- Office of Public Affairs Point of Contact: [OPA.resource@nrc.gov](mailto:OPA.resource@nrc.gov) or 301-415-8200

23



## NRC Social Media Channels



- Blog: <http://public-blog.nrc-gateway.gov/>
- Flickr: <http://www.flickr.com/photos/nrcgov/>
- Twitter: <https://twitter.com/#!/nrcgov>
- YouTube: <http://www.youtube.com/user/NRCgov>
- RSS: <http://www.nrc.gov/public-involve/listserver.html#rss>

24



## Additional Questions? NRC Representatives

Sr. Public Affairs Officer: Viktoria Mitylyng - 630-829-9662

Public Affairs Officer: Prema Chandrathil - 630-829-9663

Email: [OPA3.Resource@nrc.gov](mailto:OPA3.Resource@nrc.gov)

NRC Resident Inspector Office – Dresden Nuclear Power  
Station – 815-942-9267

25